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SOURCE

Kohtla-Yarve Mine

1. The Kohtla-Yarve Mine in Estonia was located two km north of the railroad station of Kohtla-Yarve. It was government owned and operated. Up until 1941 when the Soviets put in their own manager, the mine was managed by Mr Kuhi, a very competent and loyal Estonian who is now living in Canada.

The operation at Kohtla-Yarve was open pit mining up to 1936. From then on shafts were sunk and underground mining began. There were three main shafts, each about 20 meters deep and each equipped with an electric elevator. At a depth of 20 meters there was a main tunnel approximately two km long started from each shaft. Two other main tunnels were dug as work progressed. These tunnels were six meters apart and were dug in an oval fashion, each connecting with the shaft. Every 30 meters off the main tunnels, work tunnels branched out in a parallel fashion for two to three hundred meters. Every six meters along these work tunnels two miners would start digging from each side of the parallel tunnels; each team of two men would dig 15 meters until they met. The following sketch will show the operation, which was common to other shale oil mines. There were three such operations at the Kohtla-Yarve Mine.

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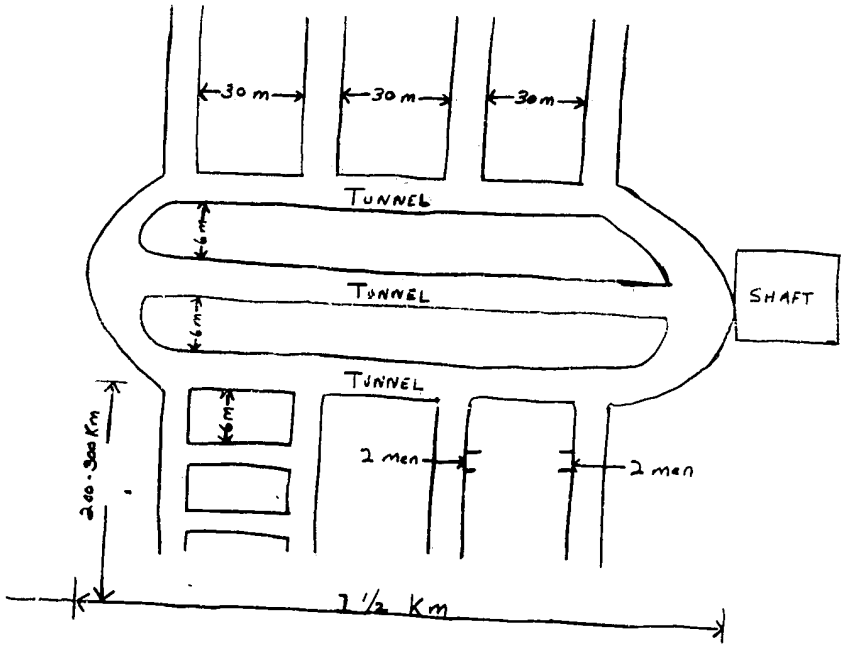

3. Tunnels measured three meters in width by two to two and one-half meters in height. [illegible] the main tunnels would be used alternately for drainage. Small Diesel engines moved the shale through the tunnels to the shafts. One miner, using drills, blasting and modern methods could mine between seven and eight tons each eight hours. It would take two men to mine this amount using hand tools and unmechanized equipment.

4. The Kohtla-Yarve Mine area was nine km square. Up to 1940, monthly production was between 25 and 30 thousand tons monthly. About two thousand persons were employed. (After 1940, the Soviets and later the Germans doubled the number of employees) There were two, eight-hour shifts in the summer, from five AM to 10 PM, and one shift of from eight to 10 hours in winter. There were four refineries in operation at Kohtla-Yarve, all working on a 24 hour basis. Recovery after processing was approximately 18%.

5. The main problem at Kohtla-Yarve was the large amount of water. Much attention was therefore given to pumping and to seeing that good support was provided. There were not enough air-ventilating shafts although there were air shafts, three meters square, every two hundred meters or so. This problem was helped somewhat by the installation of electric fans in 1938, which also helped carry out gases which accumulated.

Kukruse Mine

6. The Kukruse Mine was a branch of the Kohtla-Yarve Mine and was located approximately six km north of the Kohtla-Yarve railroad station. It encompassed an area of approximately nine square km. Operations were similar to those at Kohtla-Yarve, except that there were no refineries, all shale being taken to Kohtla-Yarve for processing. There were between eight hundred and one thousand employees at Kukruse and production averaged between 10 and 15 thousand tons monthly. Recovery after processing was approximately 18%.

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Sillamäe Mine

7. The Sillamäe Mine was owned by Swedish interests and was managed by a Mr Suits. It was not a large operation, only about five hundred persons being employed. The shale at Sillamäe was of excellent quality, 22% recovery being obtained in processing. Up until the latter part of 1943, open-pit mining was done. Underground mining was started in early 1944. Production, up to 1944, was approximately 10 thousand tons monthly. There was one refinery working on a 24 hour basis. The work schedule was the same as at other mines, two eight-hour shifts in summer and one eight to ten-hour shift in winter.

8. In 1940 - 1941, the Soviets removed parts of the Sillamäe plant to the USSR; mostly drills, compressors and some of the refining equipment were moved. They attempted to destroy the plant, but only partially succeeded. The Germans had the plant almost completely rebuilt in 1944.

9. There was a UK firm operating a mine known as Goldfields, southwest of Kohtla. It was a small mine with both open-pit and underground mining. Production was about the same as Sillamäe. I do not know too much about this mine.

10. Estonia has a rich shale oil deposit extending from Kohtla-Yarve east to the Narva River. I once heard that there were sufficient reserves to last for one hundred years. From reading Estonian language papers published in Sweden, I have gathered that the Soviets have begun opening many new mines and now employ between 20 and 30 thousand persons in the mines. They have also built up Kohtla so that it is now a large city. I also read that a pipe line for natural gas has been laid from the shale oil fields to Leningrad.

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